

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellants	:	Andrej Gregov et al.
Appl. No.	:	09/648,314
Filed	:	August 25, 2000
For	:	USER-DIRECTED PRODUCT RECOMMENDATIONS
Examiner	:	Etienne-Pierre Leroux
Group Art Unit	:	2161

REPLY BRIEF

United States Patent and Trademark Office  
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This Reply Brief is responsive to the Examiner's Answer issued on May 23, 2008, and supplements the arguments made in Appellant's Appeal Brief. As appropriate, some of the claims previously argued in the Appeal Brief are discussed below.

Independent Claim 15

Claim 15 reads as follows, with the language at issue emphasized:

15. A method in a computing system for generating item recommendations for a user, comprising:  
receiving requests from the user to display information about each of a plurality of items;  
selecting as seed items the plurality of items that were displayed;  
**generating a list of recommended items using the selected seed items,  
wherein the generated list does not contain the selected seed items;**  
**and**  
displaying the generated list of recommended items to the user.

In the Appeal Brief, Appellant asserted that the anticipation rejection of Claim 15 is improper at least because Bieganski does not teach or suggest the generation of "a list of recommended items using the selected seed items," the bolded portion of Claim 15. In connection with this issue, Appellant pointed out that Bieganski teaches the filtering of an

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existing recommendation set based on secondary information including shopping set information (e.g., items currently in a shopping basket/cart) and history set information (e.g., items previously purchased) in conjunction with item compatibility rules for processing the recommendation set with the secondary information. As taught in Bieganski, the secondary information (i.e., the shopping set and history set information), in conjunction with capability rules, are used to exclude items from the existing recommendation set, which has previously been generated in accordance with known techniques. Additionally, the secondary information can be used to add additional items based on a one-to-one association of an item in the secondary information (i.e., the shopping set/history set) with another item. Appellant's Appeal Brief illustrates with the example of adding eggs to a list of recommended items based the identification of cake mix from the shopping set and the association of eggs with the selected cake mix. Appellant thus pointed out that Bieganski did not generate recommendations "based on the selected seed items," which in turn correspond to the "plurality of items that were displayed."

In response, the Examiner's Answer asserts, in part, that the secondary information taught by Bieganski, specifically the shopping set, teaches the recited seed items in Claim 15. Additionally, the Examiner's Answer further argues that because Bieganski teaches the addition of items to a recommendation set based on associations with items in the shopping set, Bieganski teaches the generation of a list of recommended item.

Examiner Notes: shopping set 202 anticipates the claimed "plurality of items"

...  
Examiner notes: products currently being purchased anticipates the claimed "seed items"

...  
Examiner notes: identify items for suggestive selling anticipates the claimed "list of recommended items."

(Examiner's Answer, page 4.)

In support this position, the Examiner's Answer relies on the following quotation from Bieganski:

It is advantageous to use a shopping set when the value of recommendations provided to the user can be increased based on their compatibility with products

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currently being purchased. Hence, a cooking store might use the shopping set at check-out to identify items for suggestive selling, such as a Chinese cookbook for customers purchasing a Wok. (Bieganski, Col. 8, lines 8-14).

Appellant respectfully disagrees with this interpretation in that it disregards the recitation of the claim elements in Claim 15. Specifically, Claim 15 first recites "selecting as seed items the plurality of items that were displayed." Second, Claim 15 recites "generating a list of recommended items using the selected seed items." However, this recitation is further modified by the additional recitation that "the generated list does not contain the selected seed items."

As discussed in Appellant's Appeal Brief, Bieganski teaches that the true recommendation set is created by another system in an unknown manner. "In particular, the invention is believed to be applicable to increasing the value of recommendations made by existing recommender systems passing the recommendations through a capability modifier to add items, or subtract items from, the recommendation list." (Bieganski, Col 4, lines 65-68; Col. 5, lines 1-2.) The secondary information (i.e., the shopping set and/or the history set), however, cannot be considered to be the originating source of recommendations, but rather information that is used to modify the received recommendation set to generate a modified recommendation set. "[A] compatibility modified recommendation set 205 is generated by a capability modifier 200 that uses a recommendation set 210 and a set of item capability rules 204. The capability modifier may also use a shopping set 202 and an historical set 203." (Bieganski, Col. 7, lines 10-14.) Thus, Bieganski does not teach the generation of a list of recommendation items from the secondary information since the teachings of Bieganski assume that the generation of recommendations has previously occurred in an unknown manner or that the recommendations have been provided by another system.

Nevertheless, the Examiner's Answer attempts to associate the inclusion of an additional item to the pre-existing recommendation set based on an association with the item from an item from the shopping set in allegedly anticipating the recited element so Claim 15. As Appellants stated in the Appeal Brief, however, Bieganski is limited to teaching a one-on-one association of a single additional item with another single item found in the shopping set. Every example taught in Bieganski relates to the recommendation of a single item based on the specific association/relationship of that item with another *single item*. The Examiner's Answers fails to

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address how such a limited teaching (i.e., a one-to-one association) would satisfy the generation of a list of recommend items using the “selected seed items,” which correspond to a “plurality of items.” Moreover, Appellant respectfully submits that Bieganski does not teach or suggest how capability modifier rules would work to teach the generation of recommendation from multiple items from the shopping set or history set.

In further relying on the inclusion of an additional item to the pre-existing recommendation set based on an association with the item from an item from the shopping set in allegedly anticipating the recited element of Claim 15, the Examiner’s Answer fails to address the recited limitation of “wherein the generated list does not contain the selected seed items.” Bieganski is clear in the teaching of the inclusion of the shopping set as part of the recommendation set presented to the user. “The meaning of the rule is that the *purchase (recommendation)* of any item in the hot-dog-buns set would be complemented by a recommendation of any product from the hot-dogs set.” (Col. 9, lines 40-42.) (Emphasis added.) As indicated in the italicized portion, Bieganski associates items selected by the user for purchase, such as items placed in a shopping basket, as items recommended and presented to the user. Thus, in addition to the above-referenced failure by Bieganski to teach that recommendations would not be based on a plurality of items corresponding to seed items, Bieganski expressly teaches that the equated “seed items” (e.g., the shopping set) are included in the list of recommended items. Thus, Bieganski further fails to teach or suggest “wherein the generated list does not contain the selected seed items” as recited in Claim 15.

For at least this reason, the anticipation rejection of Claim 15 is improper.

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Independent Claim 16

Claim 16 reads as follows, with the language at issue shown in bold:

16. A method in a computing system for generating item recommendations for a user, the user having a persistent user profile, comprising:

displaying a plurality of item indications to the user each indicating an item;

**receiving input from the user comprising a selection of each of a plurality of the displayed item indications as seed items;**

**generating a list of recommended items using the selected seed items, wherein the generated list does not contain the selected seed items;**  
**and**

displaying the generated list of recommended items to the user.

As stated in Appellant's Appeal Brief, the recited language of Claim 16 is similar to recited elements of Claim 15, and Claim 16 is patentable for at least the same reasons presented with regard to Claim 15. In particular, Claim 16 recites "receiving input from the user comprising a selection of each of a plurality of the displayed item indications as seed items," "generating a list of recommended items using the selected seed items," and "wherein the generated list does not contain the selected seed items."

The Examiner's Answer remains deficient in that it does not address how Bieganski specifically teaches the receipt of "receiving input from the user comprising a selection of each of a plurality of the displayed item indications as seed items" as recited in Claim 16. As stated originally in Appellant's Appeal Brief, Appellant respectfully submits that the reliance of the teaching of a shopping set in the teachings of Bieganski as the "seed items" fails to teach the actual receipt of input comprising a selection of the displayed items as "seed items." Instead, input received from items added to a shopping set are indicative of user input to select the items for purchase, not as seed items.

For at least these reasons, the anticipation rejection of Claim 16 is improper.

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Independent Claim 27

Claim 27 reads as follows, with the language at issue shown in bold:

27. A method in a computing system for specifying a request for product recommendations, comprising:

for each of a plurality of groups of one or more products, displaying information describing products in the group;

for each of at least a portion of the plurality of product groups, **displaying in conjunction with the information describing products in the group a control for selecting products in the group as recommendation seeds;** and

when a displayed control is selected by a user, adding to a list of recommendation seeds products in the group in conjunction with which the selected control is displayed,

so that the list of recommendation seeds contains products in the groups whose controls are selected by the user and **the list of recommendation seeds can be used to generate a list of recommended items each based on the recommendation seeds that are selected, wherein the generated list does not contain the recommendation seeds that are selected.**

As stated in Appellant's Appeal Brief, the recited language of Claim 27 is similar to recited elements of Claim 15 and Claim 16. Accordingly, Claim 27 is patentable for at least the same reasons presented with regard to Claims 15 and/or Claim 16. In particular, Claim 27 recites "displaying in conjunction with the information describing products in the group a control for selecting products in the group as recommendation seeds," "the list of recommendation seeds can be used to generate a list of recommended items each based on the recommendation seeds that are selected," and "wherein the generated list does not contain the recommendation seeds that are selected."

For at least these reasons, the anticipation rejection of Claim 27 is improper.

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Dependent Claim 32

Claim 32 depends from Claim 27, and adds the following: “wherein a distinguished one of the product groups comprises products that are recordings of a single artist, and wherein the information displayed for the distinguished product group describes the artist.” Appellant aggress with the Examiner’s Answer that Bieganski fails to teach or suggest the recited limitation. (Examiner’s Answer, page 5.) As stated in Appellant’s Appeal Brief, Cluts does not overcome the deficiencies in the teachings of Bieganski. In a manner similar to Bieganski, Cluts is specifically limited to teaching the selection of a single seed song for recommending songs. Thus, Cluts would fail to teach or suggest “the list of recommendation seeds can be used to generate a list of recommended items each based on the recommendation seeds that are selected.” For at least these reasons, the obviousness rejection of Claim 32 is improper.

Dependent Claim 40 and 46

Claims 40 and 46 depend from Claims 15 and 16, respectively, and add the following: “removing an item from the plurality of items selected as seed items in response to a request from the user.” Appellant aggress with the Examiner’s Answer that Bieganski fails to teach or suggest the recited limitation. (Examiner’s Answer, page 6.) Additionally, as stated in Appellant’s Appeal, Chow is limited to teaching the removal of an item from a shopping cart. However, the Examiner’s Answer fails to point out any teaching in Chow regarding the generation of recommendations based on a plurality of items (e.g., the seed items). Accordingly, Chow further fails to teach or suggest the removal of an item from the plurality of items corresponding to the seed items. For at least these reasons, the obviousness rejection of Claim 40 and 46 is improper.

Dependent Claim 41 and 47

Claims 41 and 47 depend from Claims 15 and 16, and add the following: “adding an item to the plurality of items selected as seed items in response to a request from the user.” Appellant aggress with the Examiner’s Answer that Bieganski fails to teach or suggest the recited limitation. (Examiner’s Answer, pages 6-7.) Chow is limited to teaching the removal or addition of an item from a shopping cart. However, the Examiner’s Answer fails to point out any teaching in Chow regarding the generation of recommendations based on a plurality of items (e.g., the seed items). Accordingly, Chow further fails to teach or suggest the generation of a

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recommendation list based on the addition of an item from the plurality of items corresponding to the seed items. For at least these reasons, the obviousness rejection of Claim 41 and 47 is improper.

**Dependent Claim 35**

Claim 35 depends from Claim 27, and adds the following: “wherein the control displayed for a distinguished product group is a draggable portion of the information describing the product group, together with a destination region, and wherein the control displayed for the distinguished product group is selected by the user by dragging the draggable portion of the information describing the product group to the destination region.” Appellant agrees with the Examiner’s Answer that Bieganski fails to teach or suggest the recited limitation. (Examiner’s Answer, pages 7-8.) Additionally, as stated in Appellant’s Appeal, Nakajima is limited to teaching a document scrap system for creating document scraps for incorporation into other documents. The Examiner’s Answer attempts to argue that Nakajima is directed toward the concept of dragging and that it would be obvious to utilize “dragging” in the system taught by Bieganski. As previously stated, however, Bieganski does not teach or suggest controls for selecting seed items. Instead, the teaching relied upon in the Examiner’s Answer relates to items added to a shopping set based on the intended purpose of purchasing the items, not designating the items as seed items. Appellant respectfully submits that Nakajima does not teach the selection of items for inclusion as seed items for the generation of a recommendation list and specifically, the utilization of a control for “dragging the draggable portion of the information describing the product group to the destination region” as recited in Claim 35. For at least these reasons, the obviousness rejection of Claim 35 is improper.



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CONCLUSION

In view of the foregoing, and for the reasons set forth in the Appeal Brief, the anticipation and obviousness rejection of Claims 15-16, 27-35, and 40-51 are improper and should be reversed.

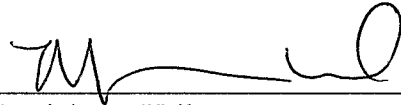
Respectfully submitted,

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Dated: \_\_\_\_\_

7/23/08

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